

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number  
WO 2004/037920 A2

(51) International Patent Classification<sup>7</sup>: C08L 27/08,  
C08J 5/18, B32B 27/32, B65D 65/40

(21) International Application Number:  
PCT/US2003/032395

(22) International Filing Date: 14 October 2003 (14.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/421,029 24 October 2002 (24.10.2002) US

(71) Applicant (for all designated States except US): DOW  
GLOBAL TECHNOLOGIES INC. [US/US]; Washing-  
ton Street, 1790 Building, Midland, MI 48674 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LEE, Eric, K.  
[CA/US]; 1100 Wildwood Street, Midland, MI 48642  
(US). KRUIDENIER, Rene [NL/NL]; Heesterlaan 27,  
NL-2803 BJ Gouda (NL).

(74) Agents: CAVENDER, Carol, J. et al.; The Dow Chemical  
Company, Intellectual Property, P.O. Box 1967, Midland,  
MI 48641-1967 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ,  
DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK,  
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK,  
SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA,  
ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished  
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: VINYLIDENE CHLORIDE POLYMER COMPOSITIONS AND FOOD CASINGS MADE THEREFROM

(57) Abstract: The present invention is a poly(vinylidene chloride) interpolymer composition comprising (1) a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid and (2) an interpolymer of vinylidene chloride and vinyl chloride, the copolymer being present in an amount effective to improve meat adhesion of a food casing made from the interpolymer composition having the copolymer as compared with a composition having the same proportions of components as the interpolymer composition but without the added copolymer (hereinafter effective amount). Preferably, the copolymer comprises ethylene and at least one alkyl ester of an unsaturated carboxylic acid. The invention is also a process for preparing a thermoplastic food casing which comprises adding an effective amount of a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid to a an interpolymer of vinylidene chloride and vinyl chloride to improve meat adhesion of the food casing. Additionally, the invention is a film comprising an interpolymer of vinylidene chloride and vinyl chloride and an effective amount of a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid. The film is preferably used in applications for contacting meat. Additionally, the invention is a combination of a film comprising an interpolymer of vinylidene chloride and vinyl chloride and an effective amount of a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid and, adjacent thereto or in contact therewith, a fatty substance, preferably a meat having a fat content, meat product having fat content, or other food having a fat content. In another aspect, the invention is a package useful for meats or other fatty substances comprising an interpolymer of vinylidene chloride and vinyl chloride and an effective amount of a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid wherein the package is designed for contact of interpolymer of vinylidene chloride with the meat or fatty substance. In another aspect, the invention is a sausage casing having a film comprising an interpolymer of vinylidene and chloride vinyl chloride and an effective amount of a copolymer of an alpha olefin and an alkyl ester of an unsaturated carboxylic acid. In yet another aspect, the invention is the use of a vinylidene chloride interpolymer composition comprising and interpolymer of vinylidene chloride and vinyl chloride and an effective amount of at least one copolymer of an alpha olefin and an alkyl ester of an ethylenically unsaturated carboxylic acid in a composition suitable for making a film, the resulting film, a molded article, a package, in each case preferably suitable for contacting or containing a fatty substance or food, preferably in a sausage casing.

WO 2004/037920 A2